Index

A

ACCUM, FREDERICK — a biographical sketch, 1.
Acetate metabolism in ruminant tissues, 189.
ACKERMAN, C. J. A complex growth factor in duodenal tissue, 347.
ALAM, S. Q., Q. R. ROGERS AND A. E. HARPER. Effect of tyrosine and threonine on free amino acids in plasma, liver, muscle, and eye in the rat, 97.
ALAM, S. Q., R. V. BECKER, W. P. STUCKI, Q. R. ROGERS AND A. E. HARPER. Effect of threonine on the toxicity of excess tyrosine and cataract formation in the rat, 91.
L-Alanine, in vivo intestinal absorption in irradiated rabbits, 235.
Alcohol(s), amino, and methyl donors in rats fed low choline diets containing added cholesterol, 501.
—, polyhydric, effect of feeding on tissue lipids and the resistance of rats to extreme cold, 414.
Alfalfa and other plant sources, evidence for an unidentified growth factor(s) for young guinea pigs, 341.
American Institute of Nutrition, invitation for nominations for 1967 awards, 520.
Amino acids(s), dietary, effect of source on zinc-deficiency syndrome in chicks, 24.
— — diets containing soybean trypsin inhibitor, growth depression and pancreatic and intestinal changes in rats force-fed, 455.
— —, essential, minimum dietary, to total nitrogen ratio for whole egg protein fed to young men, 9.
— —, free, and lipids in selected rat tissues, effect of vitamin E, arginine and methionine, 247.
— — —, in plasma, liver, muscle, and eye in rats, effect of tyrosine and threonine, 97.
— — imbalance, effect on fate of limiting amino acid, in rats, 80.
— —, — in weanling rats, tryptophan utilization; weight gain and carcass nitrogen with two feeding methods, 149.
— —, plasma, and nitrogen retention by steers fed purified diets containing urea or isolated soy protein, 385.
— —, —, concentrations, dietary and defaunation effects in sheep, 226.
— — — titers in evaluation of proteins for chick growth, importance of an accurate reference diet, 271.
— — studies, chick plasma, use of α-aminoisobutyric acid as an internal indicator, 276.
— — substrates, carbohydrate and fat (labeled), oxidation by zinc-deficient rats, 448.
α-Aminoisobutyric acid, use as an internal indicator in chick plasma amino acid studies, 276.
Amprolium, action on thiamine content of rat tissues, 197.
Appetite-regulating center, effect of amino acid imbalance in the rat, 80.
Arginine, effect on free amino acids and lipids in selected rat tissues, 247.
— -lysine-electrolyte relationships in the rat, 171.
Awards, American Institute of Nutrition, invitation for nominations for 1967, 520.

B

BAKER, D. H., D. E. BECKER, H. W. NORTON, A. H. JENSEN AND B. G. HARMON. Quantitative evaluation of the tryptophan, methionine and lysine needs of adult swine for maintenance, 441.
BALAGHI, MESBAHEDDIN, AND WILLIAM N. PEARSON. Metabolism of physiological doses of thiazole-2-^{14}C-labeled thiamine by the rat, 265.
BALAGHI, MESBAHEDDIN, AND W. N. PEARSON. Tissue and intracellular distribution of radioactive thiamine in normal and thiamine-deficient rats, 127.
BALAGHI, MESBAHEDDIN. See Pearson, William N., 133.
BAR, A. See Hurwitz, S., 311.
BARBER, SHIRLEY. See Wiese, Hilda F., 113.
BARNES, R. H., W. G. POND, E. KWONG AND I. REID. Effect of severe protein-calorie malnutrition in the baby pig upon relative utilization of different dietary proteins, 355.
BARNES, RICHARD H., SUSAN ROBERTSON CUNNOLD, ROBERT R. ZIMMERMANN, HOWARD SIMMONS, ROBERT B. MACLEOD AND LENNART KROOK. Influence of nutritional deprivations in early life on learning behavior of rats as measured by performance in a water maze, 399.
BARTLEY, J. C., AND A. L. BLACK. Effect of exogenous glucose on glucose metabolism in dairy cows, 317.
BAYSAL, AYSE, BARBARA A. JOHNSON AND HELLEN LINKSWILER. Vitamin B_6 depletion in man: Blood vitamin B_6, plasma pyridoxal-phosphate, serum cholesterol, serum transaminases and urinary vitamin B_6 and 4-pyridoxic acid, 19.
BECKER, D. E. See Baker, D. H., 441.
BECKER, R. V. See Alam, S. Q., 91.
Behavior, learning, of rats, influence of nutritional deprivations in early life as measured by performance in water maze, 399.
BENSADOUN, A. See Mayfield, E. D., 189.
BERNHART, F. W., AND R. M. TOMARELLI. A salt mixture supplying the National Research Council estimates of the mineral requirements of the rat, 495.
BIERI, J. G., AND E. L. PRIVAL. Effect of deficiencies of α-tocopherol, retinol and zinc on the lipid composition of rat testes, 55.
BING, FRANKLIN C. Frederick Accum — a biographical sketch, 1.
Biotin, effects on folic acid metabolism in rats, 422.
BLACK, A. L. See Bartley, J. C., 317.
BLAIS, R. See Mehran, A. R., 235.

Bobek, Pavel, and Emil Ginter. Metabolism of lipids in rats exposed to heat under conditions of a normal and a high fat-high cholesterol diet, 373.
Body composition, effect of acute starvation and refeeding of rats previously fed at different levels of dietary protein, 513.
Bone calcification in chicks fed isolated soy protein, effect of chelating agents and high levels of calcium and phosphorus, 471.
Briggs, George M. See Lakhanpal, Raj K., 341.
Burnett, Philip C. See Jones, James D., 171.

C

Calcium absorption and rate of passage of ^{45}Ca and ^{91}Y along the intestine in the laying fowl, 317.
—, comparative absorption from calcium gluconate and calcium lactate in man, 283.
—, fetal utilization, and placental transfer in developing swine, 335.
Calcium-45 and yttrium-91, rate of passage along the intestine, and calcium absorption in the laying fowl, 311.
— lactate and calcium gluconate, comparative absorption of calcium in man, 283.
Caldwell, Marjorie J. See Morrison, Mary A., 149.
Calorie-protein malnutrition, severe, effect in baby pig upon relative utilization of different dietary proteins, 355.
Carbohydrate, fat and amino acid substrates (labeled), oxidation by zinc-deficient rats, 448.
—, post-ruminal degradation and absorption by the mature ruminant, 241.
Caster, W. O., Hans Mohrhauer and Ralph T. Holman. Effects of twelve common fatty acids in the diet upon the composition of liver lipid in the rat, 217.
Cataract formation and toxicity of excess tyrosine, effect of threonine, in rats, 91.
Cellular response in rats during malnutrition at various ages, 300.
Chaplin, Melvin D., and Dwight J. Mulford. Amino alcohols and methyl donors in rats fed low choline diets containing added cholesterol, 501.
Chelating agents, dietary synthetic and natural, effect on zinc-deficiency syndrome in chicks, 35.
— — and high levels of calcium and phosphorus, effect on bone calcification in chicks fed isolated soy protein, 471.
Chicken(s), effect of chelating agents and high levels of calcium and phosphorus on bone calcification in chicks fed isolated soy protein, 471.
—, — of dietary amino acid source on the zinc-deficiency syndrome in chicks, 24.
—, — — — linoleate on chick liver fatty acids; dietary linoleate requirement, 465.
—, — — some dietary synthetic and natural chelating agents on zinc-deficiency syndrome in chicks, 35.
—, effects of methionine, menhaden oil and ethoxyquin on serum cholesterol of chicks, 143.
—, importance of accurate reference diet in evaluation of proteins for chick growth using plasma amino acid titers, 271.
—, rate of passage of ^{45}Ca and ^{91}Y along the intestine, and calcium absorption in the laying fowl, 317.
—, use of α-aminoisobutyric acid as an internal indicator in chick plasma amino acid studies, 276.
Cholesterol, added to low choline diets, amino alcohols and methyl donors in rats fed, 501.
— (high) — high fat and normal diet, metabolism of lipids in rats exposed to heat under conditions of, 373.
—, liver, and dietary supplements of methionine or tocopherol in rats, 247.
—, serum, and vitamin B_6 depletion in man, 19.
Choline and methionine, diets marginal in, with and without vitamin B_{12}, effect on rat liver and kidney, 69.
— diets, low, containing added cholesterol, amino alcohols and methyl donors in rats fed, 501.
Clawson, A. J., and F. H. Smith. Effect of dietary iron on gossypol toxicity and on residues of gossypol in porcine liver, 307.
Cline, J. H. See Furser, D. B., 226.
Coenzyme Q_{10}-treated and untreated vitamin E-deficient monkeys, abnormality of circulating erythrocytes, 251.
Cold environmental temperature, extreme effect of feeding polyhydric alcohols on tissue lipids and the resistance of rats to, 414.
Coniglio, John G. See Goswami, Ajit, 210.
Coon, Edmund. See Wiese, Hilda F., 113.
Copper, molybdenum and zinc interrelationships: influence of inorganic sulfate on distribution and excretion of ^{65}Zn and ^{99}Mo in pregnant rats, 365.
Cottonseed meal, effect of severe protein-calorie malnutrition in the baby pig upon relative utilization of different dietary proteins, 355.
Cow(s), dairy, effect of exogenous glucose on glucose metabolism, 317.
Cunnold, Susan Robertson. See Barnes, Richard H., 399.
Cystine deficiency and trypsin inhibitor, effects on methionine metabolism, in rats, 49.
Cystine or methionine fed to rats in a protein-free ration, and protein deficiency, effects on fatty acid changes in liver produced by, 477.

D

Darby, William J., Jr. See Pearson, William N., 133.
Das, J. B. See Scrimshaw, N. S., 9.
Davis, Jean Reiche. See Lakhanpal, Raj K., 341.
Decker, Walter J., and Walter Mertz. Incorporation of dietary elaidic acid in tissues and effects on fatty acid distribution, 165.
Defaunation and dietary effects upon plasma amino acid concentrations in sheep, 226.
Dehydrogenase activities and growth performance, 329.
— — in hepatic and adipose tissues of rats, and growth performance, effect of diet, chronic inactivity and exercise, 329.
Deprivations, nutritional, in early life, influence on learning behavior of rats as measured by performance in water maze, 399.

Diet, accurate reference, importance in evaluation of proteins for chick growth using plasma amino acid titers, 271.
—, chronic inactivity and exercise, effect on growth performance and dehydrogenase activities in hepatic and adipose tissues of rats, 329.
— marginal in methionine and choline, with and without vitamin B_{12}, effect on rat liver and kidney, 69.
Dog(s), skin lipids of puppies as affected by kind and amount of dietary fat, 113.
Duodenal tissue, a complex growth factor, in rats, 347.
Dymsza, H. A. See Stoewsand, G. S., 414.

E

Elaidic acid, dietary, incorporation in tissues and effects on fatty acid distribution, in rats, 165.
Electrolyte-lysine-arginine relationships in the rat, 171.
Enzyme(s), liver and heart, comparative effect of glucose feeding on activities of, in rats, 505.
Erythrocytes, circulating, abnormality in untreated and in coenzyme Q_{10}-treated vitamin E-deficient monkeys, 251.
Ethoxyquin, methionine, and menhaden oil, effects on serum cholesterol of chicks, 143.
Exercise, diet and chronic inactivity, effect on growth performance and dehydrogenase activities in hepatic and adipose tissues of rats, 329.
Eye(s), rat, effect of tyrosine and threonine on free amino acids in, 97.

F

Fat(s), carbohydrate and amino acid substrates (labeled), oxidation by Zinc-deficient rats, 448.
—, dietary, and fatty acid compositions of rat leucocytes and granules, 435.
—, —, effect of kind and amount on skin lipids of puppies, 113.
Fatty acid(s) and dietary fat compositions of rat leucocytes and granules, 435.
— — changes in liver produced by protein deficiency and by methionine or cystine fed to rats in a protein-free ration, 477.
— —, chick liver, effect of dietary linoleate; dietary linoleate requiremnt, 465.
— —, common, effects in diet on composition of liver lipid in rats, 217.
— — distribution, dietary elaidic acid incorporation in tissues and effects on, in rats, 165.
— — essential, requirement of young swine, 64.
Feeley, Ruth M. See Ritchey, S. J., 411.
Ferrara, G. See Rindi, G., 197.
Fish flour, effect of severe protein-calorie malnutrition in the baby pig upon relative utilization of different dietary proteins, 355.
—, Hawaii, anti-thiamine activity, 419.
Fitch, Coy D., and F. Stanley Porter. An abnormality of circulating erythrocytes in untreated and in coenzyme Q_{10}-treated vitamin E-deficient monkeys, 251.
Folic acid metabolism, effects of biotin, in rats, 422.
Formula(s), infant, products fed to hysterectomy-obtained SPF baby pigs for nutritional studies, 158.
Freedland, R. A., and A. E. Harper. Initiation of glucose-6-phosphatase adaptation in the rat, 429.
Frost, Ann B., and George V. Mann. Effects of cystine deficiency and trypsin inhibitor on the metabolism of methionine, 49.

G

Gambal, David. Effect of hormones on the testicular lipids of vitamin A-deficient rats, 203.
Gifford, Elizabeth Dyar. See Harrill, Inez, 247.
Ginter, Emil. See Bobek, Pavel, 373.
Girls, preadolescent, vitamin B_6 and B_{12} excretion patterns, 411.
Glenn, J. C. See Hansard, S. L., 335.
Glucose, exogenous, effect on glucose metabolism in dairy cows, 317.
— feeding, comparative effect on activities of some liver and heart enzymes in rats, 505.
Glucose 6-phosphatase adaptation in rats, initiation, 429.
Gossypol toxicity and residues of gossypol in porcine liver, effect of dietary iron, 307.
Goswami, Ajit, and John G. Coniglio. Effect of pyridoxine deficiency on the metabolism of linoleic acid in the rat, 210.
Grainger, R. B. See Wright, P. L., 241.
Griffith, Melvin, and Robert J. Young. Growth response of turkey poults to fractions of soybean meal, 293.
Growth depression and pancreatic and intestinal changes in rats force-fed amino acid diets containing soybean trypsin inhibitor, 455.
— factor, complex, in duodenal tissue, in rats, 347.
— factor(s), unidentified, evidence for from alfalfa and other plant sources for young guinea pigs, 341.
— performance and dehydrogenase activities in hepatic and adipose tissues of rats, effects of diet, chronic inactivity and exercise, 329.
— response of turkey poults to fractions of soybean meal, 293.
Guinea pig(s), young, evidence for an unidentified growth factor(s) from alfalfa and other plant sources, 341.

H

Hansard, S. L., H. Itoh, J. C. Glenn and D. M. Thrasher. Placental transfer and fetal utilization of calcium in developing swine, 335.
Harmon, B. G. See Baker, D. H., 441.
Harper, A. E. See Alam, S. Q., 91, 97.
Harper, A. E. See Freedland, R. A., 429.
Harper, A. E. See Yoshida, A., 80.
Harrill, Inez, and Elizabeth Dyar Gifford. Effect of vitamin E, arginine and methionine on free amino acids and lipids in selected rat tissues, 247.
Hawaii fish, anti-thiamine activity, 419.
Hilker, Doris M., and Otto F. Peter. Anti-thiamine activity in Hawaii fish, 419.

HILL, ELDON G. Effect of dietary linoleate on chick liver fatty acids: dietary linoleate requirement, 465.
HILL, ELDON G. Effects of methionine, menhaden oil and ethoxyquin on serum cholesterol of chicks, 143.
HOEKSTRA, W. G. See Nielsen, F. H., 24, 35.
HOEKSTRA, WILLIAM G. See Theuer, Richard C., 448.
HOLMAN, RALPH T. See Caster, W. O., 217.
Hormones, effect on testicular lipids of vitamin A-deficient rats, 203.
Humans, vitamin B_6 depletion; blood vitamin B_6, plasma pyridoxal-phosphate, serum cholesterol, serum transaminases and urinary vitamin B_6 and 4-pyridoxic acid, 19.
HUNG, ELEANOR. See Pearson,William N., 133.
HURLEBAUS, ALICE J. See Williams, J. N., Jr., 477.
HURWITZ, S., AND A. BAR. Rate of passage of calcium-45 and yttrium-91 along the intestine, and calcium absorption in the laying fowl, 311.
Hydrocortisone and liver glycogen concentration in rats, 429.

I

Inactivity, chronic, diet, and exercise, effect on growth performance and dehydrogenase activities in hepatic and adipose tissues of rats, 329.
Indicator, internal, in chick plasma amino acid studies, use of α-aminoisobutyric acid, 276.
Invitation for nominations for 1967 American Institute of Nutrition awards, 123.
— for nominations for 1967 American Institute of Nutrition fellows, 125.
Invitation for nominations for Honorary membership in the American Institute of Nutrition, 126.
Iron, dietary, effect on gossypol toxicity and on residues of gossypol in porcine liver, 307.
ITOH, H. See Hansard, S. L., 335.

J

JENSEN, A. H. See Baker, D. H., 441.
JENSEN, LEO S., AND FRANK R. MRAZ. Effect of chelating agents and high levels of calcium and phosphorus on bone calcification in chicks fed isolated soy protein, 471.
JOHNSON, BARBARA A. See Baysal, Ayse, 19.
JOHNSON, B. CONNOR. See Mayfield, E. D., 189.
JONES, JAMES D., RALPH WOLTERS AND PHILIP C. BURNETT. Lysine-arginine-electrolyte relationships in the rat, 171.

K

KHAYAMBASHI, HASSAN, AND R. L. LYMAN. Growth depression and pancreatic and intestinal changes in rats force-fed amino acid diets containing soybean trypsin inhibitor, 455.
KINNAMON, KENNETH E. Copper, molybdenum and zinc interrelationships: the influence of inorganic sulfate upon distribution and excretion of ^{65}Zn and ^{99}Mo in pregnant rats, 365.
KLOPFENSTEIN, T. J. See Purser, D. B., 226.
KONISHI, FRANK. Effects of diet, chronic inactivity, and exercise on growth performance and dehydrogenase activities in hepatic and adipose tissues, 329.
KRATZER, F. H. See Vohra, Pran, 106.
KROOK, L. See McCarthy, B., 392.
KROOK, LENNART. See Barnes, Richard H., 399.
KU, R. See Vahouny, George V., 505.
KUMMEROW, FRED A. See Yu, Byung Pal, 435.
KWONG, E. See Barnes, R. H., 355.

L

LAKHANPAL, RAJ K., JEAN REICHE DAVIS, JOHN T. TYPPO AND GEORGE M. BRIGGS. Evidence for an unidentified growth factor(s) from alfalfa and other plant sources for young guinea pigs, 341.
LANDI, LAURA. See Marchetti, Mario, 422.
Learning behavior of rats, influence of nutritional deprivations in early life as measured by performance in water maze, 399.
Lecithin(s) and liver triglycerides, structure, influence of geometric isomers of linoleic acid, in rats, 257.
Leucocyte and granule lipids of the rat, dietary fat and fatty acid compositions, 435.
LEUNG, P. M-B. See Yoshida, A., 80.
LEWIN, ISAAC. See Spencer, Herta, 283.
LIGHTLY, F. S. See Privett, O. S., 257.
LINKSWILER, HELLEN. See Baysal, Ayse, 19.
Linoleate, dietary, effect on chick liver fatty acids: dietary linoleate requirement, 465.
—, dietary, requirement: effect on chick liver fatty acids, 465.
Linoleic acid, geometric isomers, influence on structure of liver triglycerides and lecithins, in rats, 257.
— — metabolism in rats, effect of pyridoxine deficiency, 210.
Lipid(s) and free amino acids in selected rat tissues, effect of vitamin E, arginine and methionine, 247.
—, liver, composition in rats, effects of 12 common fatty acids in diet, 217.
—, metabolism in rats exposed to heat under conditions of a normal and high fat — high cholesterol diet, 373.
—, skin, of puppies as affected by kind and amount of dietary fat, 113.
—, testicular, of vitamin A-deficient rats, effect of hormones, 203.
—, tissue, effect of feeding polyhydric alcohols and the resistance of rats to extreme cold, 414.
Liver, chick, fatty acids, effect of dietary linoleate, 465.
— enzyme systems in young pigs, effect of source and level of dietary protein, 487.
—, fatty acid changes in liver produced by protein deficiency and by methionine or cystine fed to rats in a protein-free ration, 477.
— lipids, effects of 12 common fatty acids in the diet upon the composition of, 217.
— protein, amino acid incorporation with amino acid imbalance, in rats, 80.
LYMAN, R. L. See Khayambashi, Hassan, 455.
Lysine -arginine-electrolyte relationships in the rat, 171.

—, tryptophan and methionine needs of adult swine for maintenance, quantitative evaluation, 441.

M

MacLeod, Robert B. See Barnes, Richard H. 399.
Malnutrition at various ages, cellular response in rats, 300.
—, severe protein-calorie, effect upon relative utilization of different dietary proteins in the baby pig, 355.
Man, comparative absorption of calcium from calcium gluconate and calcium lactate, 283.
Mann, George V. See Frost, Ann B., 49.
Marchetti, Mario, Laura Landi and Petronio Pasquali. Effects of biotin on folic acid metabolism in the rat, 422.
Marco, G. J. See Wright, P. L., 241.
Mayfield, E. D., A. Bensadoun and B. Connor Johnson. Acetate metabolism in ruminant tissues, 189.
McCarthy, B., H. F. Travis, L. Krook and R. G. Warner. Pantothenic acid deficiency in the mink, 392.
McDowell, L. J. See Sewell, R. F., 64.
Mead, R. J. See Tumbleson, M. E., 487.
Mehlman, M. A. See Stoewsand, G. S., 414.
Mehran, A. R., and R. Blais. In vivo intestinal absorption of L-alanine in irradiated rabbits, 235.
Men, young, minimum dietary essential amino acid-to-total nitrogen ratio for whole egg protein fed to, 9.
Mendez, José. Effect of acute starvation and refeeding on body composition of rats fed previously at different levels of dietary protein, 513.
Menhaden oil, methionine and ethoxyquin, effects on serum cholesterol of chicks, 143.
Mertz, Walter. See Decker, Walter J., 165.
Metabolism, folic acid, in rats, effects of biotin, 422.
—, glucose, in dairy cows, effect of exogenous glucose, 317.
— of lipids in rats exposed to heat under conditions of a normal and a high fat — high cholesterol diet, 373.
— of physiological doses of thiazole-2-^{14}C-labeled thiamine by the rat, 265.
— of *trans* acids in the rat: influence of geometric isomers of linoleic acid on structure of liver triglycerides and lecithins, 257.
Methionine and choline, diets marginal in, with and without vitamin B_{12}, effect on rat liver and kidney, 69.
—, effect on free amino acids and lipids in selected rat tissues, 247.
—, menhaden oil and ethoxyquin, effects on serum cholesterol of chicks, 143.
— metabolism, and effects of cystine deficiency and trypsin inhibitor, in rats, 49.
— or cystine fed to rats in a protein-free ration, and protein deficiency, effects on fatty acid changes in liver produced by, 477.
—, tryptophan and lysine needs of adult swine for maintenance, quantitative evaluation, 441.
Methyl donors and amino alcohols in rats fed low choline diets containing added cholesterol, 501.
Milk, sow's, simulated formula and growth and development of hysterectomy-obtained SPF pigs, 43.
Mineral(s) requirements of the rat, salt mixture supplying National Research Council estimates, 495.
Mink(s), pantothenic acid deficiency in, 392.
Mohrhauer, Hans. See Caster, W. O., 217.
Molybdenum, copper and zinc interrelationships: influence of inorganic sulfate on distribution and excretion of ^{65}Zn and ^{99}Mo in pregnant rats, 365.
Monkey(s), vitamin E-deficient, abnormality of circulating erythrocytes in untreated and coenzyme Q_{10}-treated, 251.
Morrison, Mary A., and Marjorie J. Caldwell. Tryptophan utilization in a threonine-induced amino acid imbalance in weanling rats: gain in weight and carcass nitrogen with two feeding methods, 149.
Mraz, Frank R. See Jensen, Leo S., 471.
Mulford, Dwight J. See Chaplin, Melvin D., 501.

N

Neal, Robert A. See Pearson, William N., 133.
Newberne, Paul M., and Vernon R. Young. Effect of diets marginal in methionine and choline with and without vitamin B_{12} on rat liver and kidney, 69.
Nielsen, F. H., M. L. Sunde and W. G. Hoekstra. Effect of dietary amino acid source on the zinc-deficiency syndrome in the chick, 24.
Nielsen, F. H., M. L. Sunde and W. G. Hoekstra. Effect of some dietary synthetic and natural chelating agents on the zinc-deficiency syndrome in the chick, 35.
Nishida, Toshiro. See Yu, Byung Pal, 435.
Nitrogen retention and plasma amino acids in steers fed purified diets containing urea or isolated soy protein, 385.
—, total, to minimum dietary essential amino acid ratio for whole egg protein fed to young men, 9.
Noble, Adele. See Winick, Myron, 300.
Norton, H. W. See Baker, D. H., 441.
Nutter, L. J. See Privett, O. S., 257.

O

Oltjen, R. R., and P. A. Putnam. Plasma amino acids and nitrogen retention by steers fed purified diets containing urea or isolated soy protein, 385.

P

Pantothenic acid deficiency in the mink, 392.
Pasquali, Petronio. See Marchetti, Mario, 422.
Pearson, William N., Eleanor Hung, William J. Darby, Jr., Mesbaheddin Balaghi and Robert A. Neal. Excretion of metabolites of ^{14}C-pyrimidine-labeled thiamine by the rat at different levels of thiamine intake, 133.
Pearson, W. N. See Balaghi, Mesbaheddin, 127, 265.
Peter, Otto F. See Hilker, Doris M., 419.

Phosphates, various, and other complexing agents, influence on availability of zinc for turkey poults, 106.
PICHE, M. L. See Scrimshaw, N. S., 9.
Pig(s), baby, effect of severe protein-calorie malnutrition upon relative utilization of different dietary proteins, 355.
—, —, hysterectomy-obtained SPF, fed infant formula products for nutritional studies, 158.
—, growing, effect of dietary iron on gossypol toxicity and residues in porcine liver, 307.
—, specific pathogen-free (SPF), hysterectomy-obtained, use for nutritional studies of the neonate, 43.
Plant sources, other, and alfalfa, evidence for an unidentified growth factor(s) for young guinea pigs, 341.
POND, W. G. See Barnes, R. H., 355.
PORTER, F. STANLEY. See Fitch, Coy D., 251.
PRIVAL, E. L. See Bieri, J. G., 55.
PRIVETT, O. S., L. J. NUTTER AND F. S. LIGHTLY. Metabolism of *trans* acids in the rat: influence of the geometric isomers of linoleic acid on the structure of liver triglycerides and lecithins, 257.
Protein-calorie malnutrition, severe, effect in baby pig upon relative utilization of different dietary proteins, 355.
— deficiency and methionine or cystine fed to rats in a protein-free ration, effect on fatty acid changes in liver, 477.
—, dietary, effect of acute starvation and refeeding on body composition of rats previously fed at different levels of, 513.
—, isolated soy, plasma amino acids and nitrogen retention by steers fed purified diets containing urea or, 385.
—, whole egg, minimum dietary essential amino acid-to-total nitrogen ratio, fed to young men, 9.
—, dietary, effect of severe protein-calorie malnutrition in the baby pig upon relative utilization of different, 355.
—, —, — of source and level on liver enzyme systems in young pigs, 487.
— evaluation for chick growth using plasma amino acid titers, importance of accurate reference diet, 271.
PURSER, D. B., T. J. KLOPFENSTEIN AND J. H. CLINE. Dietary and defaunation effects upon plasma amino acid concentrations in sheep, 226.
PUTNAM, P. A. See Oltjen, R. R., 385.
Pyridoxal-phosphate, plasma, and vitamin B_6 depletion in man, 19.
4-Pyridoxic acid and vitamin B_6 depletion in man, 19.
Pyridoxine deficiency, effect on linoleic acid metabolism in the rats, 210.

R

Rabbit(s), irradiated, in vivo intestinal absorption of L-alanine, 235.
Rat(s), amino alcohols and methyl donors with low choline diets containing added cholesterol, 501.
—, cellular response during malnutrition at various ages, 300.
—, comparative effect of glucose feeding on activities of liver and heart enzymes, 505.
—, effect of acute starvation and refeeding on body composition when fed previously at different levels of dietary protein, 513.
—, — of amino acid imbalance on fate of limiting amino acid, 80.
—, effects of biotin on folic acid metabolism, 422.
—, — of cystine deficiency and trypsin inhibitor on methionine metabolism, 49.
—, — of 12 common fatty acids in the diet upon composition of liver lipid, 217.
—, — of diet, chronic inactivity and exercise on growth performance and dehydrogenase activities in hepatic and adipose tissues, 329.
—, effect of pyridoxine deficiency on linoleic acid metabolism in rats, 210.
—, — of threonine on toxicity of excess tyrosine and cataract formation, 91.
—, — of tyrosin and threonine on free amino acids in plasma, liver, muscle, and eye in rats, 97.
—, excretion of metabolites of ^{14}C-pyrimidine-labeled thiamine by the rat at different levels of thiamine intake, 133.
— exposed to heat under conditions of a normal and a high fat-high cholesterol diet, metabolism of lipids, 373.
— force-fed amino acid diets containing soybean trypsin inhibitor, growth depression and pancreatic and intestinal changes, 455.
—, incorporation of dietary elaidic acid in tissues and effects on fatty acid distribution, 165.
—, influence of nutrition deprivations in early life on learning behavior as measured by performance in water maze, 399.
—, initiation of glucose 6-phosphatase adaptation, 429.
— leucocytes and granules, dietary fat and fatty acid compositions, 435.
—, lysine-arginine-electrolyte relationships, 171.
—, metabolism of physiological doses of thiazole-2-^{14}C-labeled thiamine, 265.
—, — of *trans* acids: influence of geometric isomers of linoleic acid on structure of liver triglycerides and lecithins, 257.
—, mineral requirements, a salt mixture supplying the National Research Council estimates, 495.
—, pregnant influence of inorganic sulfate on distribution and excretion of ^{65}Zn and ^{99}Mo, 365.
—, resistance to extreme cold, and effect of feeding polyhydric alcohols on tissue lipids, 414.
— testes, effect of α-tocopherol, retinol and zinc deficiencies on lipid composition, 55.
—, thiamine-deficient and normal, tissue and intracellular distribution of radioactive thiamine, 127.
—, thyroid hormone-deficient, reinstatement of growth by duodenal powder, 347.
— tissues, action of Amprolium on thiamine content, 197.
— —, selected, effect of vitamin D, arginine and methionine on free amino acids and lipids, 247.
—, vitamin A-deficient, effect of hormones on testicular lipids, 203.

—, weanling, tryptophan utilization in a threonine-induced amino acid imbalance; weight gain and carcass nitrogen with two feeding methods, 149.
—, zinc-deficient, oxidation of labeled carbohydrate, fat and amino acid substrates, 448.
Reid, I. See Barnes, R. H., 355.
Requirement(s) of essential fatty acids of young swine, 64.
— of mink for pantothenic acid, 392.
Retinol deficiency, effect on lipid composition of rat testes, 55.
Rindi, R., G. Ferrara, U. Ventura and A. Trotta. Action of Amprolium on the thiamine content of rat tissues, 197.
Ritchey, S. J., and Ruth M. Feeley. The excretion patterns of vitamin B_6 and B_{12} in preadolescent girls, 411.
Rogers, Q. R. See Alam, S. Q., 91, 97.
Rogers, Q. R. See Yoshida, A., 80.
Ruminant(s) tissues, acetate metabolism in, 189.

S

Salt mixture supplying National Research Council estimates of mineral requirements of rats, 495.
Samachson, Joseph. See Spencer, Herta, 283.
Sarett, Herbert P. See Schneider, Donald L., 43, 158.
Scheck, Josephine. See Spencer, Herta, 283.
Schneider, Donald L., and Herbert P. Sarett. Nutritional studies on hysterectomy-obtained SPF baby pigs fed infant formula products, 158.
Schneider, Donald L., and Herbert P. Sarett. Use of the hysterectomy-obtained SPF pig for nutritional studies of the neonate, 43.
Schwartz, R. See Scrimshaw, N. S., 9.
Scrimshaw, N. S., V. R. Young, R. Schwartz, M. L. Piche and J. B. Das. Minimum dietary essential amino acid-to-total nitrogen ratio for whole egg protein fed to young men, 9.
Sewell, R. F., and L. J. McDowell. Essential fatty acid requirement of young swine, 64.
Sheep, acetate metabolism in ruminant tissues, 189.
—, dietary and defaunation effects upon plasma amino acid concentrations, 226.
—, mature, post-ruminal degradation and absorption of carbohydrate, 241.
Simmons, Howard. See Barnes, Richard H., 399.
Skin lipids of puppies as affected by kind and amount of dietary fat, 113.
Smith, B. W. See Vahouny, George V., 505.
Smith, F. H. See Clawson, A. J., 307.
Smith, R. E. Importance of an accurate reference diet in the evaluation of proteins for chick growth using plasma amino acid titers, 271.
Smith, R. E. Use of α-aminoisobutyric acid as an internal indicator in chick plasma amino acid studies, 276.
Soybean meal fractions, growth response of turkey poults, 293.
Soybean meal, heat-treated, effect of severe protein-calorie malnutrition in the baby pig upon relative utilization of different dietary proteins, 355.
— trypsin inhibitor, growth depression and pancreatic and intestinal changes in rats force-fed amino acid diets containing, 455.
Soy protein, isolated, effect of chelating agents and high levels of calcium and phosphorus on bone calcification in chicks fed, 471.
Specific pathogen free baby pigs, hysterectomy-obtained, fed infant formulas for nutritional studies, 158.
Spencer, Herta, Josephine Scheck, Isaac Lewin and Joseph Samachson. Comparative absorption of calcium from calcium gluconate and calcium lactate in man, 283.
Starvation, acute, and refeeding, effect on body composition of rats fed previously at different levels of dietary protein, 513.
Steers fed purified diets containing urea or isolated soy protein, plasma amino acids and nitrogen retention of, 385.
Stoewsand, G. S., H. A., Dymsza, S. M. Swift, M. A. Mehlman and D. G. Therriault. Effect of feeding polyhydric alcohols on tissue lipids and the resistance of rats to extreme cold, 414.
Stucki, W. P. See Alam, S. Q., 91.
Sunde, M. L. See Nielsen, F. H., 24, 35.
Swift, S. M. See Stoewsand, G. S., 414.
Swine, adult, quantitative evaluation of tryptophan, methionine and lysine needs for maintenance, 441.
—, developing, placental transfer and fetal utilization of calcium, 335.
—, effect of source and level of dietary protein on liver enzyme systems in young pigs, 487.
—, young, essential fatty acid requirement, 64.

T

Temperature, environmental, effect of feeding polyhydric alcohols on tissue lipids and resistance of rats to extreme cold, 414.
—, environmental, metabolism of lipids in rats exposed to heat under conditions of a normal and a high fat-high cholesterol diet, 373.
Testicular degeneration of rats, effect of α-tocopherol, retinol and zinc deficiencies, 55.
Therriault, D. G. See Stoewsand, G. S., 414.
Theuer, Richard C., and William G. Hoekstra. Oxidation of ^{14}C-labeled carbohydrate, fat and amino acid substrates by zinc-deficient rats, 448.
Thiamine, anti-, activity in Hawaii fish, 419.
Thiamine content of rat tissues, action of Amprolium on, 197.
—, ^{14}C-pyrimidine-labeled, excretion of metabolites by the rat at different levels of thiamine intake, 133.
—, radioactive, tissue and intracellular distribution in normal and thiamine-deficient rats, 127.
—, thiazole-2-^{14}C-labeled, metabolism of physiological doses by the rat, 265.
Thrasher, D. M. See Hansard, S. L., 335.
Threonine and tyrosine, effect on free amino acids in plasma, liver, muscle, and eye in rats, 97.
—, effect on toxicity of excess tyrosine and cataract formation in rats, 91.

— -induced amino acid imbalance in weanling rats, and tryptophan utilization; weight gain and carcass nitrogen with two feeding methods, 149.
α-Tocopherol deficiency, effect on lipid composition of rat testes, 55.
TOMARELLI, R. M. See Bernhart, F. W., 495.
Transaminases, serum, and vitamin B_6 depletion in man, 19.
TRAVIS, H. F. See McCarthy, B., 392.
Triglycerides, liver, and lecithins, influence of geometric isomers of linoleic acid on structure, in rats, 257.
TROTTA, A. See Rindi, R., 197.
Trypsin inhibitor and cystine deficiency, effects on methionine metabolism in rats, 49.
Tryptophan, methionine and lysine needs of adult swine for maintenance, quantitative evaluation, 441.
— utilization in a threonine-induced amino acid imbalance in weanling rats, weight gain and carcass nitrogen with two feeding methods, 149.
TUMBLESON, M. E., AND R. J. MEADE. Effect of source and level of dietary protein on liver enzyme systems in the young pig, 487.
Turkey(s), growth response of poults to fractions of soybean meal, 293.
— poults, influence of various phosphates and other complexing agents on availability of zinc, 106.
TYPPO, JOHN T. See Lakhanpal, Raj K., 341.
Tyrosine and threonine, effect on free amino acids in plasma, liver, muscle, and eye in rats, 97.
—, excess, toxicity and cataract formation in the rat, effect of threonine, 91.

U

Urea, plasma amino acids and nitrogen retention by steers fed purified diets containing isolated soy protein or, 385.

V

VAHOUNY, GEORGE V., B. W. SMITH, R. WILSON AND R. KU. Comparative effect of glucose feeding on the activities of some liver and heart enzymes in rats, 505.
VENTURA, U. See Rindi, R., 197.
Vitamin A-deficient rats, effect of hormones on testicular lipids, 203.
— B_6 depletion in man: blood vitamin B_6, plasma pyridoxal-phosphate, serum cholesterol, serum transaminases and urinary vitamin B_6 and 4-pyridoxic acid, 19.
— — and B_{12} excretion patterns in preadolescent girls, 411.
— B_{12} and B_6 excretion patterns in preadolescent girls, 411.
— —, with and without in diets marginal in methionine and choline, effect on rat liver and kidney, 69.
— E, arginine and methionine, effect on free amino acids and lipids in selected rat tissues, 247.
— — -deficient monkeys, untreated and coenzyme Q_{10}-treated, abnormality of circulating erythrocytes, 251.
VOHRA, PRAN AND F. H. KRATZER. Influence of various phosphates and other complexing agents on the availability of zinc for turkey poults, 106.

W

WARNER, R. B. See McCarthy, B., 392.
WIESE, HILDA F., WILLIAM YAMANAKA, EDMUND COON AND SHIRLEY BARBER. Skin lipids of puppies as affected by kind and amount of dietary fat, 113.
WILLIAMS, J. N., JR., AND ALICE J. HURLEBAUS. Fatty acid changes in liver produced by protein deficiency and by methionine or cystine fed to rats in a protein-free ration, 477.
WILSON, R. See Vahouny, George V., 505.
WINICK, MYRON, AND ADELE NOBLE. Cellular response in rats during malnutrition at various ages, 300.
WOLTERS, RALPH. See Jones, James D., 171.
WRIGHT, P. L., R. B. GRAINGER AND G. J. MARCO. Post-ruminal degradation and absorption of carbohydrate by the mature ruminant, 241.

Y

YAMANAKA, WILLIAM. See Wiese, Hilda F., 113.
YOSHIDA, A., P. M-B. LEUNG, Q. R. ROGERS AND A. E. HARPER. Effect of amino acid imbalance on the fate of the limiting amino acid, 80.
YOUNG, ROBERT J. See Griffith, Melvin, 293.
YOUNG, VERNON R. See Newberne, Paul M., 69.
YOUNG, V. R. See Scrimshaw, N. S., 9.
Yttrium-91 and calcium-45, rate of passage along the intestine, and calcium absorption in the laying fowl, 317.
YU, BYUNG PAL, FRED A. KUMMEROW AND TOSHIRO NISHIDA. Dietary fat and fatty acid compositions of rat leucocytes and granules, 435.

Z

ZIMMERMANN, ROBERT R. See Barnes, Richard H., 399.
Zinc availability for turkey poults and influence of various phosphates and other complexing agents, 106.
Zinc, copper and molybdenum interrelationships: influence of inorganic sulfate upon distribution and excretion of ^{65}Zn and ^{99}Mo in pregnant rats, 365.
— deficiency, effect on lipid composition of rat testes, 55.
— -deficient rats, oxidation of labeled carbohydrate, fat and amino acid substrates, 448.
— -deficiency syndrome in chicks, effect of dietary amino acid source, 24.
— — syndrome in chicks, effect of dietary synthetic and natural chelating agents, 35.